Regarding Diapheromera velici Walsh and Manomera blatchleyi Caudell (Orth.: Phasmidae).

By A. N. Caudell, of the Bureau of Entomology, U. S. Department of Agriculture, Washington, D. C.

The type material of *Diapheromera velici* Walsh consisted of one female specimen from Illinois, taken in a place overgrown by weeds beneath the boughs of two isolated ash trees, and one pair from Nebraska taken by Dr. Velie in a place overgrown by weeds but with no trees within a long distance of it. The description drawn from these three specimens appears to apply to *Manomera blatchleyi* so far as concerns the female, but the characters ascribed to the male apply to the true *velici*. The slender acute basal spine of the cerci of the male described by Walsh certainly pertain to *velici* rather than to *blatchleyi* and, besides, if it had been the male of *blatchleyi* Walsh had before him he would very surely have mentioned the but slightly swollen intermediate femora as a character decidedly at variance with those of *D. femorata*, the species with which he compared this new species. That he did specifically notice the middle femora is evident from the fact that he mentions their lacking the brown banding of *femorata*. Thus it appears very certain that, while the female from Illinois was quite surely a specimen of *M. blatchleyi*, the male from Nebraska, probably also the Nebraska female, was the true *velici*. That the male is to be rightly considered as the specific type is evident from the fact that the male is morphologically the more important in this group and that this construction is according to good sense and in compliance with Par. 73*h* of the Entomological Code of Nomenclature.

Diapheromera velici may be distinguished from *Manomera blatchleyi* by the comparatively shorter and anteriorly broader head of both sexes, by the strongly swollen intermediate femora of the male and by the posterior femora of both male and female being furnished beneath with a prominent subapical spine, in *Manomera* this spine being either entirely absent or very small. The last dorsal segment of the abdomen of the

female is longer in *blatchleyi* than in *velici*, being about 4 mm. in the former and 3 mm. in the latter; the cerci of the female *Manomera* are also decidedly longer than in either *Diapheromera velici* or *femorata*, the actual length in adult individuals before me being 3.75 mm. in *blatchleyi*, 2 mm. in *velici* and 1.25 mm. in *femorata*. Additional characters for the separation of the males of *velici* and *blatchleyi* are found in the inner basal projections of the cerci, these being slender and apically acute in *velici*, while in *blatchleyi* they are blunter and stouter, less so, however, than in *D. femorata*.

Diapheromera velici is apparently not at all a common species and probably does not occur in Illinois, or rarely so.

Material in the National Museum comes from the following localities; San Diego, Texas, May 15th, one ♂, Schwarz; Victoria, Texas, August 24th, one ♂, W. E. Hinds; 40 miles South of Alice, Texas, June 15th, 1904, one mated pair, Barber; Stillwater, Oklahoma, one ♂, Caudell; Garden City, Kansas, July 27th, 1891, one ♀; Lakin, Kansas, July 27th, 1891, one ♂; Pipestone, Minnesota, August 4th, 1911, one ♂. The locality labels on the Kansas specimens are not perfectly legible and, as the dates are the same, it is possible that they are from the same source.

As represented by the above listed material this species is seen to extend across the Middle States from Texas to Minnesota. The exact local habitat of none of these specimens is known except of the mated pair from 40 miles south of Alice, Texas; these were taken by Mr. Barber on weeds or shrubs on the prairie some distance from any woodland. This agrees with the habitat of the type.

Manomera blatchleyi is represented in the National Museum by material from Iowa, Indiana, Illinois, Kansas, Oklahoma, Maryland, Virginia, New York and New Jersey. The Atlantic Coast material is composed of female specimens only, but they appear to agree specifically with specimens from the type locality. The Middle West specimens, so far as known, were taken in open field or prairie regions. Of the Atlantic Coast specimens I took one in the woods on a stone and Mr. Barber took one on a post by the Club House on Plummer's Island, Maryland. These are the only ones of which I know the exact

local habitat, but my good friend, Wm. T. Davis, of Staten Island, New York, who has taken these insects in numbers, assures me that this is not a tree species. The following quotation is from a recent letter from him on this question: "I have collected a great many females of the *Manomera* that occurs about New York, and have seen a great many more that I let stay in the low vegetation, so that they might not be exterminated. I have always found the insects on golden rods, Asters and such like plants, and can assure you that it isn't a tree species." This conforms with the known habitat of more western material and seems to make rather sure the determination of these eastern specimens as *blatchleyi*. It is certainly singular that among the somewhat ample material of Atlantic Coast specimens found in various eastern collections not a single male is to be found. Can it be that this indicates parthenogenesis?

The Lake Mosquito, Mansonia titillans Walk., and its Host Plant, Pistia stratiotes Linn., in the Canal Zone, Panama (Dip.: Culicidae).*

By L. H. Dunn, formerly Entomologist of Board of Health Laboratory, Ancon, Canal Zone.

That the formation of Gatun Lake introduced new elements creating prominent changes in the flora and insect fauna of the Canal Zone, Panama, is manifest beyond all doubt. Prior to the beginning of the construction of the Gatun Dam and the Spillway, the area now covered by the lake was traversed by the swift-flowing Chagres River and the numerous smaller rivers forming its tributaries. The Chagres afforded good drainage throughout its valley with the exception of a low marshy area south of Gatun. This area was known as the "Black Swamp." It was several square miles in extent and of irregular formation. In the dry season this region consisted of a series of small lakes, pools and sluggish streams.

* Read before the Medical Association of the Isthmian Canal Zone, January 18, 1918.